

IN THE CLAIMS

Claims 1-24 (cancelled)

Claim 25 (new): A process comprising:

- (i) crosslinking a polymer; and
- (ii) adapting the conformation of the polymer obtained from (i) to a template dissolved or suspended in a solvent by interacting the polymer with the template, so as to increase the interaction enthalpy between the conformation and the template by more than 0.1 kcal/mole, the template being a chemical compound or a biological structure.

Claim 26 (new): The process of claim 25 further comprising:

- (iii) fixing the conformation obtained from (ii) by crosslinking.

Claim 27 (new): The process of claim 25 wherein (ii) takes place in at least two steps.

Claim 28 (new): The process of claim 27 wherein, after each of the at least two steps, the conformation obtained from the step is fixed by crosslinking.

Claim 29 (new): The process of claim 27 wherein at least one of the at least two steps is carried out in the absence of the template.

Claim 30 (new): The process of claim 25 wherein the polymeric network is prepared on a support material.

Claim 31 (new): The process of claim 30 further comprising the step of applying the polymer to a support material in layers in at least two successive steps.

Claim 32 (new): The process of claim 31 wherein the applying step leads to a primarily crosslinked polymer network that has a conformation that can be adapted to the template.

Claim 33 (new): A polymeric network prepared by the process of claim 25.

Claim 34 (new): The process of claim 25 further comprising:

(iii) separating the template from the other substances, by the polymer obtained from (ii) being exposed to a mixture of the template and the other substances and preferentially attracting the template to the polymer.

Claim 35 (new): The process of claim 25 further comprising:

(iii) enhancing conversion of the template, by the polymer obtained from (ii) being exposed to the template and attracting the template to the polymer surface and temporarily binding the template to the surface.

Claim 36 (new): The process of claim 25 further comprising:

(iii) enhancing an ability to recognize the presence of the template, by the polymer obtained from (ii) being exposed to the template and attracting the template to the polymer surface.

Claim 37 (new): A sensor that outputs a signal in response to the presence of the template, the sensor including the polymer after the polymer has been predisposed, by step (ii), to preferentially attract the template.

Claim 38 (new): The process of claim 25 wherein, in step (ii), the polymer is adapted to multiple templates to obtain multiple conformations.

Claim 39 (new): A process comprising:

(i) adapting the conformation of a polymer to a template by interacting the polymer with the template, the template being a chemical compound or a biological structure;
(ii) crosslinking the polymer obtained from (i); and
(iii) exposing the polymer obtained from (ii) to the template for the polymer to preferentially attract and adhere the template to the polymer.

Claim 40 (new): The process of claim 39 wherein, in step (iii), the polymer is exposed to a mixture of the template and the other substances and separates the template from the other substances.

Claim 41 (new): The process of claim 39 wherein step (iii) occurs along with, and enhances, a conversion of the template.

Claim 42 (new): The process of claim 25 wherein step (iii) occurs along with, and enhances, detecting by the polymer of the presence of the template.

Claim 43 (new): The process of claim 25 wherein step (iii) occurs along with, and enhances, the output by the polymer of a signal in response to presence of the template.